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10/031,593	01/23/2002	Cha-Gyun Jeong	K5675.0005/P005	6285

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EXAMINER

REKSTAD, ERICK J

ART UNIT PAPER NUMBER

2613

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/031,593	Applicant(s) JEONG, CHA-GYUN	
	Examiner Erick Rekstad	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a Final Rejection for application no. 10/031,593 in response to the amendment filed on December 5, 2005 where in claims 1-14 are presented for examination.

Response to Arguments

Applicant's arguments filed December 5, 2005 have been fully considered but they are not persuasive.

In regards to claim 1, the applicants argue the rejection of the claims based on the Nonomura and Washino references. Specifically the applicants argue:

1. Nonomura does not teach disclose or suggest compressing and processing multi-screen digital video signals by multi-thread scaling using a single integrated analog/digital converter for each channel.
2. Nonomura does not teach the use of multi-screen digital video and the video signals of Nonomura are only for storing or scaling to display.
3. Washino does not teach scaling for compressing and processing of multi-screens digital video signals by multi-thread scaling based on the odd/even indicators, using a single A/D for each channel.

US Patent 6,219,030 to Nonomura clearly teaches the method of compressing and processing a digital video signal by multi-thread scaling using a single integrated analog/digital converter (Col 8 Lines 52-57, Col 11 Line 62-Col 12 Line 10). Note, the NTSC decoder (702 of Fig. 7) is an integrated analog/digital converter. Further note, that the cited section (Col 11 line 62-Col 12 Line 10) teaches the scaling of the odd

fields for display and scaling the even fields for storing. As stated in the first office action, Nonomura is silent on the use of multi-screen digital video display. US Patent 5,625,410 to Washino is used to describe the well known art of providing a multi-screen digital video display. Washino teaches the video may be analog and are individually and independently digitized and displayed at a first set of image sizes and may be stored in digital form at a second set of image sizes (Abstract). Therefore, Washino teaches the use of individual A/D converters for each input. Further, the displaying and storing at different sizes is similar to Nonomura. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the multi-screen digital video display of Washino with the scaling and storing means of Nonomura not only because both Washino and Nonomura teach scaling differently for displaying and for storing but in order to more efficiently monitor multiple camera outputs as taught by Washino.

In regards to the arguments related to claims 3, and 6, the applicants rely only on the arguments for claim 1. Therefore these arguments have been responded to based on the above response for claim 1.

Applicant's arguments with respect to claims 7-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,219,030 to Nonomura et al. in view of US Patent 5,625,410 to Washino et al.

[claims 1, 2 and 4]

Nonomura teaches the method of compressing and processing a video signal by multi-thread scaling, which uses a single integrated analog/digital converter comprising:

(a) scaling (scaling unit (802) of Figure 8) digital video signal outputted from analog/digital converter (NTSC Decoder (702) of Figure 7) to have a first resolution for compression, or to have a second resolution for a displaying process depending on the even/odd fields of the inputted video signals (Col 9 Lines 12-18, Col 11 Line 62-Col 12 Line 10); and

(b) storing and compressing the scaled digital video signals of the first resolution, or storing and processing for displaying the scaled digital video signals of the second resolution (Col 11 Line 62-Col 12 Line 10, Col 13 Line 53-Col 14 Line 17). Nonomura does not teach the use of multi-screen digital video signals.

Further, as required by claims 2 and 4, Nonomura teaches the scaling of the even frames for storage and scaling of odd frames for display (Col 11 Line 62-Col 12 Line 10, Col 13 Line 53-Col 14 Line 17).

Washino teaches a similar PC based video monitoring system with the addition of multiple video sources (Abstract). Each camera is provided a single A/D converter (100 of Figure 9, Col 7 Lines 55-60). Washino teaches several different scaling sizes

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for displaying multiple video signals on a display (Col 5 Line 1-Col 6 Line 6, Figs 1-6).

Washino further teaches the object of the invention is to provide a more efficient method for monitoring camera outputs by means of multiple-window display system implemented on a computer platform (Col 3 Lines 53-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the single video signal processing method of Nonomura with the multiple video signal monitoring method of Washino in order to provide a more efficient method for monitoring multiple camera outputs as taught by Washino.

[claim 5]

Washino further teaches the multi-screen process is the process for 4 screens, 9 screens and 25 screens as shown in Figures 1, 2 and 4. Though Washino does not teach the use of 16 screens it would have been obvious to one of ordinary skill in the art at the time of the invention that a 4x4 display is an obvious variation of a 2x2, 3x3 and 5x5 display (Official Notice).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonomura and Washino as applied to claim 1 above, and further in view of US Patent 5,881,205 to Andrew et al.

Nonomura and Washino teach the method of claim 1. Nonomura and Washino do not teach the use of 352x240 resolution. Andrew teaches the resolution 352x240 is one of the fixed picture size specified by the White Book standard (Col 3 Lines 61-67). It would have been obvious to one of ordinary skill in the art at the time of the invention

to use to the 352x240 resolution with the method of Nonomura and Washino in order to provide a video in compliance with the White Book standard as taught by Andrew.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonomura and Washino as applied to claim 1 above, and further in view of US Patent 5,648,792 to Sato et al.

Nonomura and Washino teach the method of claim 1. Washino further teaches the division of a display for use by multiple viewing windows (Col 3 Lines 1-28, Figs. 1-6). Nonomura and Washino do not teach the use of a 720x480 display. Sato teaches the use of an LCD display with the resolution of 720x480 (Col 6 Lines 33-39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Nonomura and Washino in order to provide 4 screens, 9 screens or any number of screens for an LCD display (Official Notice).

Claims 7, 10-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonomura and Washino in view of US Patent 5,185,819 to Ng et al. [claim 7]

As shown in Figure 5, Nonomura teaches the system for processing a video signal in which the even frames are scaled and stored in the external memory (505) and the odd fields are scaled and displayed on the display (302). The system contains an analog/digital converter (702, Fig. 7) contained in the image input board (504) (Col 8 Lines 52-57). Nonomura suggests the analog/digital converter generates field indicators in order to store field info at specific memory locations, which is then used to convert and scale the video signals (Col 12 Lines 19-30). The system further contains a

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compression storage (502) which stores the even fields before storage in the external storage (505) (Col 13 Lines 64-67) The system further contains a cpu (501) which initializes the system and further controls the processing of the video (Col 7 Lines 55-67, Col 12 Lines 14-23). The system further contains a graphic display board (503) used to display the odd fields (Col 8 Lines 32-44). Nonomura does not teach the use of multiple video streams or a buffer for storing the fields to be displayed before sending to the video memory. Nonomura does not specifically teach the generating of field indicators.

Washino teaches in Figure 7 the input of multiple video streams for use in a PC based system for monitoring and storing video for security or other monitoring applications (Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the single video signal processing system of Nonomura with the multiple video signal monitoring system of Washino in order to provide a more efficient method for monitoring multiple camera outputs as taught by Washino. Washino does not teach the use of a buffer for the odd fields before being sent to the graphics card. Washino does not teach the generating of field indicators.

As both Nonomura and Washino teach the use of a PC based monitoring system and Nonomura teaches the use of a buffer for the even fields before storing in an external storage, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a buffer to store the odd fields until needed by the graphics processing device (OFFICIAL NOTICE).

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As shown in Figure 2, Ng teaches the input of a video source (10) into a compression system. The system contains a means for determining the field type and generating a field type indicator in order to provide even fields for processing by one method and providing odd fields for processing by a different method (Col 4 Lines 29-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the field indicators of Ng with the system of Nonomura and Washino in order to store the fields in the proper location for further processing as taught by Ng.

[claims 10, 11, and 14]

As shown above for claim 1, Nonomura and Washino teach a similar method of compressing and processing digital video signals. Nonomura further suggest the indicating of the field type in order to store the field in the correct location (Col 12 Lines 19-30). Nonomura does not specifically teach the outputting of the field type.

As shown in Figure 2, Ng teaches the input of a video source (10) into a compression system. The system contains a means for determining the field type and generating a field type indicator in order to provide even fields for processing by one method and providing odd fields for processing by a different method (Col 4 Lines 29-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the field indicating method of Ng with the method of Nonomura and Washino in order to store the fields in the proper location for further processing as taught by Ng.

[claim 12]

As shown above for claims 1 and 10, Nonomura teaches the compressing and storing of the even field and the displaying of the odd field. It would have been obvious to one of ordinary skill in the art at the time of the invention to compress and store the odd fields and display the even fields as a design choice (Official Notice).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonomura, Washino and Ng as applied to claim 7 above, and further in view of US Patent 5,881,205 to Andrew et al. and US Patent 5,648,792 to Sato et al.

[claims 8 and 9]

Nonomura , Washino and Ng teach the system of claim 7. Andrew teaches the resolution 352x240 is one of the fixed picture size specified by the White Book standard (Col 3 Lines 61-67). Nonomura and Washino do not teach the use of 352x240 resolution. It would have been obvious to one of ordinary skill in the art at the time of the invention to use to the 352x240 resolution with the method of Nonomura and Washino in order to provide a video in compliance with the White Book standard as taught by Andrew.

Washino further teaches the division of a display for use by multiple viewing windows (Col 3 Lines 1-28, Figs. 1-6). Nonomura and Washino do not teach the use of a 720x480 display. Sato teaches the use of an LCD display with the resolution of 720x480 (Col 6 Lines 33-39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Nonomura and Washino in order to provide 4 screens, 9 screens or any number of screens for an LCD display (Official Notice).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonomura, Washino and Ng as applied to claim 10 above, and further in view of Andrew and Sato.

[claim 13]

As shown above for claim 10, Nonomura, Washino and Ng teach the method of claim 10. Nonomura, Washino and Ng do not teach the use of 352x240 resolution.

Andrew teaches the resolution 352x240 is one of the fixed picture size specified by the White Book standard (Col 3 Lines 61-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use to the 352x240 resolution with the method of Nonomura, Washino and Ng in order to provide a video in compliance with the White Book standard as taught by Andrew.

Washino further teaches the multi-screen process is the process for 4 screens, 9 screens and 25 screens as shown in Figures 1, 2 and 4 (Col 3 Lines 1-28, Figs 1-6). Though Washino does not teach the use of 16 screens it would have been obvious to one of ordinary skill in the art at the time of the invention that a 4x4 display is an obvious variation of a 2x2, 3x3 and 5x5 display (Official Notice). Nonomura, Washino and Ng do not teach the use of a 720x480 display. Sato teaches the use of an LCD display with the resolution of 720x480 (Col 6 Lines 33-39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method of Nonomura and Washino in order to provide 4 screens, 9 screens or any number of screens for an LCD display (Official Notice).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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